

Abstract of the Invention

A method, probe, and system for detecting presence of cavitation in a fluid and measuring cavitation density and intensity of a specific locale in the fluid. A first cavitation void and associated energy perturbation, produced in a first fluid, moves within the first fluid and is received at a very thin plate, which separates the first fluid from a second fluid and is part of a light-proof chamber containing the second fluid. An energy perturbation in the first fluid is received at the thin plate and produces at least one cavitation void or associated energy perturbation in the second fluid; and the energy perturbation in the second fluid is eventually converted into an electromagnetic signal. This signal is received by a photomultiplier and converted to an electronic signal that indicates the presence of cavitation. The system can distinguish between cavitation voids produced at one location and/or time interval and voids produced at another location and/or another time interval.